# THE VETERINARY RECORD

A Weekly Journal for the Profession.

EDITED BY WILLIAM HUNTING, F.R.C.V.S.

No. 1192. MAY 13, 1911 VOL. XXIII.

### THE NOMINATIONS FOR COUNCIL.

Wednesday morning, May 17, will be the latest date for receiving nominations for the coming election to Council, and we may reasonably suppose that it is unlikely that there will be any additions to the list as it now stands. Members have an opportunity of selection, since there are 14 nominations to fill 8 vancies. The names are:—

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| W. F. Barrett | A. Lawson |
| O. C. Bradley | A. E Mettam |
| W. Burt | J. McCall |
| J. Clarkson | W. Packman |
| J. Dunstan | S. Stockman |
| W. J. Fletcher | A. Watson |
| W. W. Grasby | S. Wharam |

### THE ANNUAL DINNER.

The Annual Dinner, as in the last two years, will be held at The Trocadero, on the initiative of a small group of members. This year, the available space on Wednesday, June 7, is limited, and it is advisable that all members intending to be present should send in their names at an early date, to Mr. W. Hunting, F.R.C.V S., 5 Halkin Place, Belgrave Square, S.W. The price of the Dinner is 10/6, and the hour 7 p.m. Late applicants must take their risk of disappointment.

### THE NEW PRINCIPAL AT DICK COLLEGE.

Dr. Bradley's appointment as Principal of the Royal (Dick) Veterinary College in succession to Prof. Dewar was briefly intimated in our last issue and it is with pleasure that we offer him our congratulations. It is doubtful if a more appropriate choice of Principal could have been made, and Dr. Bradley may, with every confidence, be looked to to uphold the dignity of the position to which he has been appointed, and to maintain the institution whose interests have been committed to his care in a high state of efficiency. His selection on the eve of the commencement of work on a new college is particularly appropriate, for his knowledge of teaching institutions at home and abroad will be invaluable in the important work of arranging and equipping the new buildings.

Dr. Bradley's scientific attainments are of a high order. Of Lancashire orgin, he was educated in the New Veterinary College, from which he qualified in 1902. He was at once appointed to the Chair of Anatomy and held that position for eight years, when he was transferred to the older Edinburgh Institution in succession to Prof. Mettam. Conjointly with his teaching he undertook the course of medicine in the University of Edinburgh, and was awarded the degrees of Bachelor of Medicine and Bachelor of Surgery in 1900. His University career was distinguished by his selection as a research scholar in anatomy for a period of two years, and of such merit was the work he did under the guidance of Prof. Schäfer that he was elected Goodsir Fellow, a reward carrying with it a grant of £100 for two years. Dr. Bradley then embarked on a course of study at Freiburg, in Germany, and a few years later he graduated Doctor of Science. In 1907 he was "capped" Doctor of Medicine in the University of Edinburgh.

In scientific circles Dr. Bradley's contributions to the study of anatomy and embryology are well known, and of these the reports of his studies on the development of the brain, and later, on the development of the mammalian liver are probably the most valuable, and they have received well merited and almost world-wide recognition. The presentation of the Steel Memorial Medal in 1908 was a just reward for valuable scientific work quietly and efficiently performed, and his selection by the Royal College of Veterinary Surgeons for this distinction met with unanimous approval.

Dr. Bradley is a valuable member of various scientific societies to whose proceedings he has made important contributions. He has served on the Council of the Royal Society of Edinburgh, and is Secretary of the Royal Physical Society. He is a Vice-President of the Scottish Natural History Society, and of the National Veterinary Association. It was during his Presidency of the Scottish Metropolitan Veterinary Medical Society that he revived the proposal for the amalgamation of the Veterinary associations in connection with which he has been very prominently before the veterinary profession during the past two years. Dr. Bradley has been nominated for Membership of the Council R.C.V.S. and his election to that body will add to it a valuable member.

### OPERATION FOR CATARACT IN A FOAL.

O. Jordai, of Bergen, Norway, records the case of a blind foal, which was brought to Bergen in October, 1909, to be slaughtered. Examination revealed that the animal was suffering from "grey cataract" in both eyes.

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The foal had been born in May of the same year, and was said to have been blind from birth. During the summer it had been with the mare at grass; and had done well, although it could not always immediately find the mother's udder

Jordai consulted with Dr. Borthen, an opthalmic surgeon; and an operation for cataract was decided upon. This was performed in the beginning of November, the animal being previously prepared by daily instillations of atropine into the eyes for some days. Immediately before the operation, the eyes were anæsthetised by a 10% solution of cocaine.

The animal was thrown and secured; and the head was elevated upon a straw pillow and held by a powerful man. Shortly before the operation, the eyes were washed out with boiled water.

Borthen undertook the operation, and performed it by introducing the knife in the lower portion of the cornea, through the anterior chamber, and into the lens. The lens was split, and the posterior lens-capsule was also cut through.

The foal was then turned over upon the other side, and the other eye similarly treated. In the case of this second eye, however, the posterior lens-capsule was *not* cut through. The eyes were not bandaged after the operation; but the animal was kept well tied up for some days. Atropine was instilled daily into the eyes for a fortnight.

The present result is that, in the eye the posterior capsule of which was cut through, the lens-mass is now quite dissolved; while in the other eye the pupillary region is occupied by remnants of capsule, after the manner of a cataract.

The young horse, as it now is, spent the summer upon mountain meadows with other horses. The power of vision showed itself sufficient for life in these hilly countries.—*Berliner Tier. Woch.*

## A PECULIAR ACCIDENT.

The subject was an officer's charger. The animal was seen at 12.10 a.m. when it was all right—particular care being taken to see that it was properly fastened. At 5.50 a.m. it was found dead in the position shown in the photograph.

The collar chain which was five feet long, was fastened to the head collar and passed through a hole in the manger and attached to a log in the ordinary way.

When found in the morning the chain passed from its attachment to the head collar up the near side of the neck and right round the neck, thence passing up the off side of the head to the manger. The near side of the muzzle was firmly pressed against the manger. The off fore leg was passed over the top of the neck but was not caught in the chain. There was no sign of a struggle. Post-mortem examination showed dislocation of the atlanto-axial articulation.

R. Porteous, Capt. A.V.C.

## A NEW AGENT FOR THE TREATMENT OF BOVINE INFECTIOUS VAGINAL CATARRH

Very favourable results have been obtained in human medicine in the treatment of affections of mucous membranes, and especially in affections of the genitals, by the use of salts of sozojodol. Sozojodol is a preparation patented and supplied by the firm of H. Trommsdorff, Aix-la-Chapelle, and owes its therapeutic effect to the fact that it contains iodine and carbolic acid in combination. Various salts of sozojodol are prepared for therapeutic use, all of which possesses a strong antiseptic and bactericidal action. The most important are those of zinc and mercury, and it must be noted regarding the latter that sozojodol-hydrargyrum is much less toxic than such mercurial compounds as corrosive sublimate.

Of late years sozojodol-hydrargyrum has been extensively and very successfully employed upon the Continent in the treatment of infectious vaginal catarrh of cattle. For this purpose the makers supply (but only to veterinary surgeons or to their order) a special preparation under the trade name of "Bissulin," which is an odourless substance consisting of various fats with the addition of sozojodol-hydrargyrum.

Bissulin is sold in cases and half-cases, each containing 100 or 50 pieces for use upon cows, or 50 or 25 pieces of a size and shape suitable for introduction within the prepuce of bulls. In cool or cold weather the cases should be kept open in a warm room for twenty-four hours before use, as, if this is not done, the preparation is difficult to apply, melts slowly, and may cause some discomfort and straining.

The usual general measures of disinfection are adopted as adjuncts to the use of Bissulin. Cleansing and disinfection of the stalls, separation if possible of the diseased from the healthy animals, and periodic (at least twice weekly) cleansing and disinfection of the external genitals, tails, and hoofs of the animals, are all essential measures. If complete separation of the diseased from the healthy animals is impossible, the healthy animals should be placed at the *upper* end of the stall so that the discharges from the diseased ones do not flow past them.

The actual method of using Bissulin is as follows. Any pus present in the fold of the clitoris is pressed out, and a piece of Bissulin is rubbed, without using great force, upon the nodules visible upon the vaginal mucous membrane, upon the clitoris and its surroundings, and over the accessible portion of the vagina. About one-half to three-quarters of the piece is thus used up, and the remainder is then carefully pushed into the depth of the vagina, where it quickly melts. If the vaginal mucous membrane is thickly coated with pus or mucus, previous cleansing by irrigation with a one-half to one per cent. lukewarm solution of alum is advisable.

This procedure is repeated daily for the first week of the treatment. For the next two weeks it is repeated every other day only; and for the fourth, fifth, and sixth weeks, treatment every third day is sufficient.

Bulls are treated similarly, the external parts being washed with a lukewarm disinfectant fluid, the preputial tuft of hair removed, and a piece of Bissulin introduced within the prepuce with the same frequence as in the case of cows.

The average number of pieces of Bissulin required to effect a cure is from 15 to 20 for each animal, and this represents a cost of little more than two shillings' worth of the preparation for each animal. Its use in practice is thus cheap, and numerous Hungarian and German veterinary surgeons testify to its efficacy against bovine infectious vaginal catarrh. A further advantage is that it seems, when used in the manner described above, to be quite non-toxic; for many thousand animals have been treated with it up to the present, without a single cases of mercurialism being observed.

W. R. C.

## ABSTRACTS FROM FOREIGN JOURNALS.

### Anthrax in the Buffalo.

Hutyra and Marek regard it as doubtful whether buffaloes are susceptible to anthrax. Desider Szathmavy now records a case in a well-nourished, six-year-old female buffalo, whose neighbour, a *cow*, had died two days before of anthrax. The buffalo became ill (the temperature, however, being only 102°F.); and, in addition to slight tympany and difficulty of breathing, an increase of sensitiveness of the left side of the abdomen could be determined. The urine was blood-red, and the visible mucous membranes injected bright red.

The animal was slaughtered, but only incompletely bled. The blood was pitch-black, thin, and scarcely coagulated after two hours. It showed the characteristic rods under the microscope, when stained after Gram and Weigert's methods. In the subcutaneous connective tissue the veins were dilated, and filled with thin fluid blood. The muscles were dark red. The abdominal cavity contained 17½ pints of reddish fluid. The spleen was enormously swollen, weighing about 70lb., and measuring about 28 4-5th inches long, 16 4-10th inches broad, and 6 4-5th inches thick. Anthrax bacilli were also demonstrated in the spleen. During life neither a high temperature nor other symptoms indicative of anthrax were observed; but the post-mortem and bacteriological examinations placed it beyond doubt that anthrax occurs in buffaloes.—*Berliner Tier. Woch.*

### Anthrax in Dogs and Cats.

The annual reports of the Prussian official veterinary surgeons for the year 1908 contain several cases of the transmission of anthrax to dogs and cats. One dog, which had licked up some of the blood of a cow slaughtered while suffering from anthrax, became affected with a severe inflammation of the throat and larynx, but recovered. In

another dog, bloody diarrhœa appeared after eating anthrax flesh, and this case also recovered; while two other dogs, which had been fed with the flesh of a sheep dead of anthrax, died. One ox, which was slaughtered while suffering from anthrax, infected three animals; two cats which had eaten some of the entrails dying the next day, while a dog which had eaten the spleen showed a swelling of the head, which disappeared after a few days.

The reports also note an outbreak of anthrax in a menagerie at Magdeburg, in which two lions, six months old, two pumas of the same age, and a nineteen-year-old bear succumbed. The cause of the infection could not be explained.—*Berliner Tier. Woch.*

### Subperiosteal Abscess in a Horse.

Oskar Reinish records (*Tier. Zentrablatt*) the case of a well-bred saddle horse which, within two years, was repeatedly sharply blistered on account of an apparent splint on the medial surface of the left metacarpus, close underneath the knee-joint. Lameness, however, always recurred. The swelling felt firm and of bone-like hardness, and on that account was diagnosed as a splint by different veterinary surgeons. Reinisch, despite dissuasion from colleagues, resolved upon operative intervention.

He accordingly made an incision of 4 4/5th inches long, and then found that he had to deal with a very firm connective tissue. As the incision was carried on to the bone, about half a thimble full of grey pus of cream-like consistence was evacuated. The periosteum was thickened and intimately united with the new tissue; and the surface of the bone was rough, as if gnawed. The diagnosis of sub-periosteal abscess was now decided upon.

The connective tissue was removed, the surface of the bone curetted, and tincture of iodine was applied. The upper two-thirds of the cutaneous wound was then sutured, the lower third being left open. Recovery was now rapid, and the horse became completely serviceable. It has since taken part in cavalry manœuvres; and has never become unfit for this work.

Reinisch is of the opinion that many splints are really nothing more than a sub-periosteal abscess, and are mistaken for splints because of the unusually firm natnre of the connective tissue, which gives the impression of a bony growth. He advises that the diagnosis should be established by means of a strong hollow needle, which should be made to penetrate right down to the bone. If only a quite small quantity of exudate is found remaining in the needle, operative intervention is indicated.—(*Berl, Tier. Woch.*)

### An Outbreak of Enzootic Abortion in Mares.

In the winter of 1907-8, the Governmental stud at Beberbeck was visited by an extensive outbreak of abortion amongst the mares. Prof. Dammann, of Hanover, undertook the investigation of the cause, and reports (*Archiv. fur wissenschaftl. u. prakt. Tierheilk.*) the following results:

I. *Investigation of the aborted foals and membranes.* The membranes showed no striking alterations of any kind, and especially no subchorial œdema. The Gram negative intra-cellular diplo-streptococci, described by Ostertag as the cause of infectious abortion in mares, were not to be found. In some of the membranes only Gram-positive extra-cellular diplo-streptococci were found.

II. *Transmission Experiments.* Numerous transmission experiments were made. The animals used were pregnant mares, goats, sheep, rabbits, and guinea-pigs; the infective materials used were small pieces of the aborted chorions, emulsions of the same, pleural and peritoneal fluid from the aborted foals, and cultures of the diplo-streptococci which were found. These infective materials were either introduced into the vagina of the experimental animals or given orally; but in no case was abortion produced.

III. *Investigation of the Hay and Hayseed at Beberbeck, and Experiments with the latter.* Special poisonous plants were not found. Ergot was absent. Only isolated specimens of the spores and mycelia of fungi were present. A species of mite (perhaps *Acarus fœnarius*) was present in striking abundance. Feeding experiments were undertaken with the hayseeds; and in some instances abortion followed. A bouillon culture was also made from the hay seeds, and a pregnant guinea-pig received 1 c.c. of this subcutaneously on two days. Eight days later the animal produced four dead young ones.

IV. *Investigation of the Drinking Water.* This yielded no special results.

V. *Clinical Observations.* Of 64 pregnant mares, fully 39 aborted. In the month of February 30 abortions took place, these occurring upon an average between 9 and 10½ months in the pregnancy. In 9 cases the foals were born living. Symptoms of colic, giddiness, loss of appetite, weakness of the loins, and icterus of the mucous membranes of the head, were present in different mares.

From his investigations Dammann arrives at the conclusion that the outbreak of abortion which occurred at Beberbeck was not of infectious nature. The idea that the water supplied to the mares contained lead, or was otherwise of bad quality, can also be excluded. It is much more probable that the misfortune is attributable to the defective quality of the food.—*Berliner Tier. Woch.*

W. R. C.

(It is not clearly stated what the fault was that could be found with the food.—Transl.)

### Chronic Catarrh of the Uterus in a Mare.

A mare which would not breed was in the habit of emitting about a litre of whitish-yellow ropy fluid which V.S. Pschorr diagnosed as due to uterine catarrh. As the neck of the uterus was not closed, about 4 litres of fluid were removed by catheter, and 5 litres of a solution of creolin injected and drained out in the same way; ¼ of a litre of 2% solution of protargol was injected and left in. For three days she emitted small quantities of fluid. On the fourth the treatment was repeated and she remained cured.—*M. T. Woch.*

### Illness due to Margarine.

An outbreak of illness having been traced to a consignment of margarine from Altona, steps were taken to determine the cause, which was found to be due, not to animal fats, but to a fatty acid resembling croton oil, a vegetable oil not previously used in the manufacture was admitted to have been used in this particular output.—*Ostertag's Zeits.* F. E. P.

## MANGE IN HORSES.*

By Ralph Bennett, F.R.C.V.S.

When, in answer to our Secretary's exhortation, I was moved to consent to read a paper, it was not by the thought that I had anything fresh to impart, but by the desire to gain information from the discussion which might follow my remarks. I only trust that you will not find those remarks as dry as "brick-dust."

It used to be said, I believe by the late Prof. Spooner, that if one put all the skin diseases into a bag and shook them up they would all come out mange. This, while a great testimony to the prevalence of mange, cannot, of course, be taken too literally. The term "mange" must be restricted to *skin disease caused by the presence of specific animal parasites.* These parasites, or acari, belong to the Arachnidæ—the spider family.

Three species of these parasites are found affecting the horse: the Sarcoptes or burrowing mites; the Dermatodectes or sucking mites (also termed Psoroptes); and the Symbiotes or scale eating mites. I hope you will pardon me if I refer briefly to the characteristics of these three species, because their recognition is of prime importance for correct diagnosis.

*The Sarcoptes* are quite microscopic, being only from ·2 to ·5 mm. long. They are of a brownish-white colour, have horse-shoe shaped heads with a pair of sharp conical jaws for cutting their way through the skin. The adults have four pairs of legs, the first, second, and fourth pairs in the male being provided with tulip-shaped discs; these discs, however, are only found on the first and second pairs in the female. They burrow under the epidermis and feed on the plasma which oozes through the true skin.

The *Dermatodectes* are somewhat larger, varying from ·5 to ·8 mm. long. They are just visible to the naked eye, and are quite easily seen with an ordinary hand lens. The head is long and pointed, carrying sharp piercing jaws. Tulip-shaped suckers are found on all four pairs of feet in the adult male, but only on the first, second, and fourth pairs in the female. These mites live on the outer surface of the skin, which they pierce to enable them to feed on blood and lymph.

The *Symbiotes* are almost as large as the Dermatodectes, being just visible to the naked eye. The head is broad and short, and the feet are furnished with tumbler-shaped discs with short stems. These are found on all four pairs in the male, but are absent from the third pair of feet in the female.

### Diagnosis.

This is of great importance, especially in those districts where mange is a notifiable disease.

The chief clinical symptoms are the falling of the hair and intense irritation. Of these I think the falling of the hair is the more constant, some horses showing very little irritation in the early stages. When small round patches are seen from which the hair has fallen, leaving a rather scabby or scurfy condition of the skin, mange should be suspected, even when there is little or no itching. It is by no means safe to conclude that these patches are of constitutional origin, and search should be made for the parasite before a definite opinion is formed. Careful examination of scrapings in all cases will prevent one from making many errors; both by enabling one to discover cases of mange which otherwise would be overlooked, and also by discriminating between mange and such conditions as extensive infection with lice, or with the fleas or acari of fowls, which present the same clinical appearance as mange. The discovery of the parasite is not only necessary for correct diagnosis, but is also essential for accurate prognosis.

The method of examining scrapings which I have found most satisfactory is as follows:—First pluck out the hair from around a recently infected patch and thoroughly scrape the skin with a pocket knife; a good quantity of material should be taken. Some of this should be put on to a dark surface, such as a black book cover or a slate, and then place in direct sunlight or near a fire. In a few minutes examine with a good hand lens. In a good many cases one will then be able to see the acari moving about, and differential diagnosis can then easily be made by transferring a parasite to a glass slide and examining under a low power of the microscope.

Supposing no parasites are found with the hand lens, some of the scabs should be put on to a slide, held with a needle, and the inside surface scraped with the point of a knife. The dust thus obtained can then be examined under a low power. Frequently one can then find a live parasite or two, or possibly a dead one, or it may be only remains of parasites, such as the outer shell or legs, or masses of eggs just hatching out into larvæ. In any case sufficient evidence for a correct opinion can practically always be secured.

If the case is one of sarcoptic mange one can never find the parasites with the hand lens, it is always necessary to use the microscope. Even then the sarcoptic mites are difficult to discover, but one can generally find masses of scales in which the burrows made by the mites are plainly visible.

In sarcoptic mange the parts usually first affected are the head and neck, or the part of back covered by the saddle. It has a tendency to be localised to the fore part of the body, and only in old standitg, neglected cases does it extend all over the surface of the skin.

Dermatodectic mites have some preference for the more sheltered parts of the body, such as under the limbs and belly, and the first signs of disease in some cases are found in these places. In a large proportion of cases, however, dermatodectic mange starts in the parts covered by the collar and saddle, infection having been conveyed by the harness. This variety of mange spreads fairly rapidly, especially in ill-kept horses. Quite commonly, scabby patches are found practically all over the body very shortly after the first infection.

It is said that neither the sarcoptes nor the dermatodectes will infest the hair of the mane or tail. I am not quite satisfied that this is invariably the case, although I have never been able to find the parasites in either mane or tail.

Symbiotic mange usually only affects the legs and thighs. Still, in very advanced cases the parasites invade other parts of the body, and may then present an almost identical picture to what is seen in dermatodectic mange.

The prospect of recovery in dermatodectic mange is good, most cases properly treated making a perfect recovery. Sarcoptic mange, on the other hand, is very difficult to cure on account of the acari burrowing right under the epidermis. The symbiotes although living on the surface of the skin are sometimes very

*Read at the meeting of the Central Veterinary Society on Thursday, May 4th.

difficult to get rid of: this, I think, being due to the greasy condition of the skin always associated with this form of mange. A point which I should like to raise here is, Is the disease known as "Grease" caused by the presence of the symbiotes, or does the occurrence of "grease" give rise to conditions so suitable for the symbiotes that they almost invariably attack the legs so affected? The two are certainly very frequently found associated.

### Treatment.

Affected animals should at once be rigorously isolated from non-affected ones. The first step in treatment should be to clip the animal. This I regard as most necessary to effect a quick recovery. The patient should then be dressed *all over* with the dressing selected. There is a large range of drugs to select from for this purpose, creosote, creolin, tar, turpentine, carbolic acid, sulphur, and tobacco probably being the best, and are most commonly used. If tar and turpentine or any other agent dispensed in an oil basis are selected, care should be taken not to combine them with a drying oil, such as Ol. lini. If this is done the oil, especially linseed oil, will dry on the skin into a thick varnish-like substance and afford a very efficient protection to the acari or their eggs; so that one is almost certain to get a recrudescence of the disease just as one thinks that the animal has recovered.

The dressings should not be too strong, nor should they be applied too frequeutly. Frequent washings with soft soap and water, to which some alkaline substance such as Sodii carb. has been added are very beneficial, as by this means scales and dirt are removed, so allowing the dressings to act much more efficiently. Treatment should be continued for three or four weeks.

It is an old saying in the country that two sales and a fire are necessary before a place is clear of mange. This bears eloquent testimony to the great need for treating the buildings, harness, etc., as well as the affected animals. While the two sales are of very doubtful advantage to the communily at large, the fire, except from the point of view of the insurance companies, is excellent.

The whole building, whatever its structure, should be thoroughly scraped, disinfected, and whitewashed. Where it is practicable I am strongly in favour of having all wooden partitions and walls pulled out and new work put up. Where this is impossible I think the wood work should always be burned with a painter's lamp, and then scraped and disinfected thoroughly. All harness and brushes should be soaked in strong disinfectant; the stuffing of saddle-pad and collar should be taken right out and burnt, new linings being substituted. All clothing worn by affected horses should be burnt. Some authorities say that no rugs should be put on horses suffering from mange, even after they have been clipped in winter time. I cannot quite agree with this, for if no rugs are allowed, the animals suffer terribly with the cold in winter. The rugs, however, should always be burnt afterwards.

Two other conditions ought to be observed during treatment, viz., that the animals should be allowed a generous diet, and they should be given regular exercise.

The last, but not least, point to be mentioned is, that that the attendants appointed to look after the infected horses should not be allowed to have anything at all to do with the other horses during the outbreak, because they may quite easily transfer the parasites from affected to clean animals through the medium of their own clothes.

## ROYAL COUNTIES VETERINARY MEDICAL ASSOCIATION.

A meeting was held on Friday, April 28th, at the small Town Hall, Maidenhead, when there were present: Mr. E. J. Mellett, President, in the chair; Messrs. Geo. P. Male, Hon. Sec. and Treas.; Percy J. Simpson, A. L. Butters, S. H. Slocock, R. C. Tennant, J. Willett, and John Varney, members.

Visitors: Messrs. G. A. Roberts, M.R.C.V.S., and T. C. Dykes, L.D.S.

Apologies for inability to attend were received by letter and telegram from Principal McCall, and Messrs. W. Shipley, W. Wilson, R. Roberts, H C. Jagger, J. Hatch, G. E. King, F. W. Hanks, and Jas. East.

### Petrol and Motor Taxes.

The Hon. Sec. read a letter from the Secretary R.C.V.S., acknowledging receipt of resolution passed by this Association on the above subject, and stating that he would bring the matter before the Council at the next meeting. Mr. Bullock added: "You will no doubt have seen from *The Record* that our appeal to the Chancellor of the Exchequer has, so far, been unsuccessful.

### The Amended Rules of the National Veterinary Association.

Copies of the amended rules proposed by the Committee of the National Veterinary Association had been forwarded to the members.

The President remarked that before they discussed the proposed rules it would perhaps be as well to decide whether they were going to affiliate with the National Association or not. No doubt the rules should be discussed; but he thought it was rather a question for the next agenda paper.

The Hon. Sec. said he had received a letter from Prof. Gofton, who was acting in the matter for the National Association, stating that he wished this Association to give an opinion on the amended rules. He said nothing at all on the subject of affiliation; and he (Mr. Male) supposed that would be left till afterwards.

Mr. Willett, on Rule 1, observed that the object of putting the word "Medical" into the name of the Association was to enable the Irish members of the profession to fall into line. That conferred on them certain privileges, such as exemption from jury service. Several matters arose on the new rules, such as that of subscriptions—whether the existing members of the National Association should, if the affiliation came into force, resign and join through their local secretary at 7/6, instead of 10/6, which they paid now: though it was true that individually 2/6 a year was not much. He thought there was really not much in the rules to find fault with. It was thought by the National Association that a fee of 1/- per member from the local branches was a small matter. The point he could not really seize was this: If any existing Society was a "branch" or "division" he took it that, *ipso facto*, all the members of that divsion would be members of the National: yet they said in one of the rules that they need not be—which seemed to him to be anomalous.

The Hon. Sec. replied that it would be quite possible under those rules for a society itself to be affiliated and yet for none of its members at all to be actually members of the National. It was a very curious position for our Association to pay for the full number of its members, whether they belonged to the National or not.

Mr. Slocock thought that the members of various societies would not subscribe to each Association. He, himself, should subscribe through the Royal Counties, as that was his first Association. A member of the National Association appeared to be entitled to all the privileges

without subscribing to the local society, and, in that case, how were the "locals" going to live?

Mr. SIMPSON said the understanding was that if a man joined the National Association he then had the privileges of any one of the affiliated Societies.

The HON. SEC.: I don't think that that was understood.

It having been agreed that the rules should be discussed,

Mr. SIMPSON moved, and Mr. BUTTERS seconded, "that the amended rules proposed by the Committee of the National Veterinary Association be provisionally accepted," the object of the resolution being to raise amendments.

This was agreed to, and the rules were then gone through *seriatim*.

On Rule 2 the Secretary moved that Section 4 be deleted. Mr. Male observed that in his opinion those matters should be left to the Central Authority as much as was possible, and not dealt with by any local division.

This was seconded by Mr. Simpson, and, after some discussion, carried, four members voting in favour.

On Rule 14 the Secretary said he took it that by discussing the rules that day they did not bind themselves to accept them or otherwise?

The PRESIDENT: You cannot affiliate without the consent of the members; you only accept the rules.

Mr. SLOCOCK asked if Rule 15 meant that the Associations were to maintain their independence, and make their own rules?

The PRESIDENT thought the Central had taken the weight of the other Associations. It was understood amongst them that they were going to maintain their independence.

Mr. SLOCOCK: Yes, we have argued that all through.

Mr. WILLETT, speaking to Rule 16, said that, although it was a small matter, he took it that a lot of practitioners would resign direct membership of the National Association and join through their local Secretary, or be transferred.

Mr. SLOCOCK said that he should do so.

Mr. WILLETT added that if they were all on the same basis it would be a different matter. It particularly affected the poorer Societies, especially in Scotland, where some of them had subscriptions of only 5/- a year.

The PRESIDENT: Then they get 1/- a head from the Associations, whether you are members of the National or not.

The SECRETARY said he would like it made clear whether he and others in a like position would be held responsible under the clause in this Rule which runs: "Members nominated by the Secretary of the division shall pay an annual subscription of 7/6. In each case the subscription shall be paid to the general treasurer."

The PRESIDENT thought the rule meant that the local Associations should be responsible for subscriptions.

Mr. SIMPSON took it that the Secretary would simply send up the complete list of names of those who wished to become members; he did not think the Secretary would be held responsible for collecting their subscriptions.

Mr. MALE, to make the matter clear, proposed "That in the opinion of this Association the last sentence of Rule 16 should be altered to read—'In each case the subscription shall be paid to the general treasurer, and that the local treasurer shall not be responsible for such subscriptions.'"

Mr. WILLETT seconded this, and it was carried *nem. con.*

Mr. DYKES (on the invitation of Mr. Simpson) explained that dental surgeons had a Central Body, on the Council of which each local body was represented by the President and Secretary for the time being. They paid an annual subscription to the British Dental Association of one guinea, and to their own local branch of 5/-. They could not be members of the local body without joining the Central Body, which was first established about the year 1870. The British Dental Association did not grant the diploma, but all their rules were governed by them, and had to be submitted in the first place to the Council.

Mr. SIMPSON then moved "That the amended Rules, as proposed by the Committee of the National Veterinary Association, as amended at this meeting, be generally approved, but on the understanding that this Association is not bound in any way."

Mr. BUTTERS seconded. The rules would, he said, be again considered at the next meeting of the National Association in July, when no doubt a good many suggested alterations would be considered.

The resolution was carried.

### THE NEXT MEETING

Mr. SIMPSON threw out the suggestion that a social gathering and river picnic might be held, without cost to the funds of the Association, to which ladies should be asked, considering that it might attract some members who did not usually attend the meetings. Members might also invite friends.

The suggestion was welcomed, and on the proposition of Mr. Willett, seconded by Mr. Slocock, it was resolved unanimously that the President, the Secretary, and Mr. Percy Simpson be appointed a committee to carry out the arrangements, fix a date at the end of July, and send out early notice.

## THE CLINICAL ASPECT OF JOHNE'S DISEASE AND THE AVIAN TUBERCULIN TEST."

By G. P. MALE, M.R.C.V.S.

It has fallen to my lot at the last minute to be responsible for a paper at this meeting of our Association and therefore I must ask your indulgence with these hastily prepared notes. We have recently had a number of surgical papers and articles treating especially with the respiratory conditions, so that I offer no apology for introducing for your consideration a disease affecting the bowels of cattle.

During the last few years the pathology and bacteriology of this specific bacterial enteritis has been fairly well made out, and therefore I will not dwell upon it now. As is well known to you all, the causal organism is a small, acid-fast bacillus closely resembling the tubercle bacillus and having practically the same staining reaction and morphological characters. It is known all over Europe, and appears to affect most of the ruminating animals, as cases are recorded in the sheep, buffalo, and deer, as well as bovines, in which, of course, it is most common. The period of incubation is undoubtedly a long one, and may extend to months or even a year or more, hence the great difficulty of eradicating it from a herd.

Probably the only natural method of infection is ingestion, the bacilli being taken by the mouth with contaminated food. It appears also to be a purely contagious disease, though it does not spread with any rapidity. The disease has been described chiefly in connection with Jersey cattle, but all bovines are susceptible to it, and I have met it in nearly all breeds: Jerseys however seem to be more prone to it than other. The disease is most common in adult cattle, though I have met it in young Jerseys between 1 and 2 years old, and in one outbreak 3 Devon beasts about 2 years 3 months were affected at the same time in a herd of ten.

The practitioner's attention is not usually called to the disease until diarrhœa has become a marked symp-

tom, but if the animal has been carefully observed there is usually some slight loss of condition and unthriftiness apparent for some time previous without any apparent cause for it. Diarrhœa usually sets in suddenly, often after parturition, or as a complication to some other diseased condition. In other cases the onset of diarrhœa is less rapid, and the condition assumes a more chronic form. In these latter cases there is no rise in temperature, but in what might be called the acute cases I have sometimes found a temperature ranging from 103 to 105° lasting for some days, the appetite also being in abeyance. Here the wasting is very rapid and the animal is soon reduced to a skeleton. The more chronic cases gradually get emaciated, but the appetite usually remains good, and even abnormally so, rumination takes place, the eye is bright, the pulse normal, This may go on for months till death takes place, which is the invariable rule in all cases where diarrhœa has been a symptom.

In some of the chronic cases death may be delayed for many months by careful feeding and astringent medicines, the diarrhœa being held in check. In one in which treatment was adopted the diarrhœa ceased for about a month, only to come on again with renewed violence. The condition of the fæces is usually fœtid, watery, and contains a number of air bubbles, but as this maintains in other conditions not associated with the Johne's bacillus it cannot be looked upon as a diagnostic symptom.

### Lesions.

The lesions are confined to the intestine and lymphatic glands of the abdomen, but even in these the pathological changes are sometimes not very striking, and may easily be overlooked. The commonest situation for distinct lesions is in the posterior end of the small intestine, *i.e*, the ileum and part of the jejunum ; but the anterior part of the large intestine may show marked inflammation and congestion.

In advanced cases the lesions are almost characteristic Even before the ileum is opened it is seen to be distinctly thickened, and if grasped in the hand this thickening can be easily felt. When opened there is seen a marked corrugation of the mucous membrane which is permanent and cannot be effaced by stretching. The surface of the bowel is often inflamed and red, but this is not always so ; sometimes it is quite pale. In other cases the mucous membrane is intensely inflamed, but there is very little thickening or wrinkling. No ulceration is ever observed.

The corrugation is sometimes present very soon after symptoms of diarrhœa are shown. In one case in which a first calving cow was killed a week after diarrhœa commenced, the ileum was distinctly thickened and wrinkled, showing that the condition had been present for some considerable time, although no definite symptoms had been shown.

The lymphatic glands may be slightly enlarged and watery. I have several specimens of bowel on view, in some the wrinking is well marked. In one there is only slight thickening while in another specimen there was considerable inflammation apparent in the fresh state, but very little wrinkling.

[The paper was illustrated by formalined specimens showing the thickening and corrugation of the mucons membrane of the ileum, and by specimens under the microscope of the bacilli mounted.]

### Diagnosis during Life.

This is the most important consideration for the clinician, as he has to decide whether an animal with chronic diarrhœa shall be slaughtered or whether treatment shall be commenced, and if the latter, what success is likely to attend his efforts.

From what has been said it can be easily seen that there is nothing at all characteristic about the symptoms that would enable one to distinguish it from diarrhœa due to parasites or other causes, though by weighing up all the history, etc., one can arrive at a fairly safe conclusion in many instances. The history will usually reveal other cases on the same farm occurring sporadically for perhaps a number of years. Usually only one animal is affected out of a number, and it is generally an adult one. In parasitic gastritis usually *a number of young animals* are affected at the same time. If tuberculosis is present other signs of that condition will be noticed, *e.g.*, cough, and respiratory abnormalities, whereas in Johne's disease, there is no cough, and if the ordinary tuberculin test is applied there is no reaction. It has been said that it can be diagnosed by a microscopical examination of the fæces for acid-fast bacilli: but it is only occasionally that one can find these bacilli in sufficient numbers in the fæces to warrant a diagnosis, and then one must be certain that they are not tubercle bacilli. I have tried the method of obtaining bacilli by scraping the wall of the rectum with the finger nail, spreading on a slide and examining for the bacilli, but without success. Moreover, failure to find bacilli would prove nothing, as the bacilli are not always present in the rectum. We must therefore look to another agent. Bang (junr.) discovered that when tuberculin prepared from Avian T.B. was injected into an affected animal a more or less decided reaction occurred. This method I have employed with Avian tuberculin, kindly given me by Mr. Stockman, with the following results.

*Herd 1.* Jerseys, consisting of 1 bull, 10 cows, and 8 heifers and calves were tested, and 2 cows and 2 heifers gave the following reactions : the others showed no rise of temperature :

| | Time of injection. | 9th hour. | 12th hour. | 15th hour |
|---|---|---|---|---|
| *a* | 100·4 | 104 | 103·2 | 101 |
| *b* | 101 | 102 | 104 | 101·4 |
| *c* | 101 | 102 | 104 | 105 |
| *d* | 101·4 | 101·4 | 103·2 | 99·2 |

(*a.*) Had diarrhœa at the time of injection, was slaughtered and proved to be affected with Johne's disease. Sir John M'Fadyean most kindly confirmed the diagnosis.

(*b*) Was isolated from the herd, and some weeks afterwards developed diarrhœa. She was at once slaughtered, and on post-mortem examination the characteristic thickening of the bowel wall was seen, and a bacteriological examination showed the presence of acid-fast bacilli.

(*c*) Was slaughtered and was found to have the disease.

(*d*) Was afterwards tested with ordinary tuberculin, but gave no reaction. She was slaughtered and the bowel was examined by Mr. Stockman, and, although he was unable to find the bacillus in the specimen sent, he gave it as his decided opinion that it was a case of Johne's disease.

It may be suggested that perhaps these cows had tuberculosis ? This is negatived by post-mortem examination and by failure to react to the tuberculin test, which had previously been applied to all but the calves. It may be said also that the fact of four reacting and showing the disease at post-mortem, does not prove that the others which *did not* react were healthy. Against this there is the fact that there have been no cases for the last 12 months, though previously they were seen every few months.

As I shall show later, although preventive measures were employed and the cattle put on fresh pasture for six months, cases still occurred before the animals were subjected to the test.

*Herd 2.*—Thirty-two Jerseys of all ages tested with Avian tuberculin last May. Five gave a positive and

one I classed as a doubtful reaction, viz., 26. The temperatures of the reactors are as follows :

| No. | Time of injection | 9th Hour | 12th Hour | 15th Hour |
|---|---|---|---|---|
| 5 | 101·2 | 101 | 103·8 | 103·8 |
| 8 | 101 | 103·2 | 101·4 | 101 |
| 20 | 101 | 104 | 102·4 | 102·2 |
| 24 | 101·8 | 101·8 | 103·2 | 104 |
| 29 | 101 | 101 | 105 | 102 |
| 26 | 102 | 102 | 103·2 | 103·6 |

Unfortunately circumstances did not permit of my proving the correctness of the test, for these animals were sent away from the farm immediately. It is significant, however, that there has not been another case of Johne's disease since, though previously it was common. Also all these animals were distinctly unthrifty, and I was able to pick most of them out from a number of the herd two days after the test, although I had not seen them personally before.

Two suspected cases which I tested recently, occurring on separate farms where there is no history of previous disease, gave the following reactions :

| No. | Time of injection | 9th hour | 12th hour | 15th hour | 18th hour |
|---|---|---|---|---|---|
| 1 | 101 | 101·4 | 102 | 101·2 | 101 |
| 2 | 100·2 | 102 | 101·2 | 101 | 101 |

In both these cases the small intestines were inflamed and somewhat thickened, but there were no characteristic corrugations as are met in the most typical cases of Johne's disease, although both cows had been affected for several months with profuse and persistent diarrhœa.

The bowels of No. 1 were examined bacteriologically for Johne's bacilli by Sir John M'Fadyean, who failed to find any acid-fast bacilli. My assistant, Mr. Dunn, searched most carefully in the second case for bacilli, but without result. This bears out the test, which gave practically a negative result, the rise in temperature being only a slight one in each case.

I might say that both these cows had been previously tested with ordinary tuberculin, but gave no reaction.

Failure to find the bacilli does not, of course, prove that these animals *were not* affected with the disease, but taking the negative result of the test alone into consideration it may point to some other irritant as being the cause of the diarrhœa, etc., and if so we may not be right in ascribing every case of persistent chronic diarrhœa and wasting where parasites or tuberculous lesions are not found at post-mortem examinations, to Johne's disease.

This, I think, should be borne in mind in any legislation that may be forthcoming in this connection.

### Treatment.

Several agents have been put forward as cures for this disease, but up to the present I have been unable to find one effectual. In turn I have used all kinds of astringents, antiseptics and tonics with no permanent results, although in several cases treatment has been commenced the instant diarrhœa started, and persisted with for considerable periods. Tobacco in the form of balls, Copper sulphate solutions, Perchloride of iron solutions, Nitro-hydrochloric acid, Sulphuric acid have been employed, but undoubted I obtained the best results from Cyllin given diluted in drachm doses once or twice daily. In several cases the diarrhœa has been held in check for days, and in one case for weeks. Of course the actions of medicines were aided by good concentrated food, warm comfortable byres, etc.

The conclusion is forced upon one that by the time symptoms of diarrhœa are shown the disease has been present for some considerable time, and the bowels are so badly involved that treatment *must* prove quite ineffectual.

I am in hopes that with the Avian tuberculin test the disease will be discovered in its early stages, and then treatment may be commenced with much greater hopes of success.

Preventive measures are rendered most difficult on account of the long incubation period, during which the animal must be voiding large numbers of bacilli, infecting byres and lands on which they graze. No reliable data have as yet I believe been collected as to how long the bacilli may live outside the body in a soil.

In one farm I advised that all cattle should be removed from the usual pastures and put on to fresh ground, and only horses allowed there for six months, the pasture land and ponds etc. in the meantime being dressed with 5cwt. each of salt and lime. This was carried out, but I regret to say it appeared to have no effect on the recurrence of the disease.

From my present knowledge I can understand this; probably many animals were already affected and were carrying the bacilli in their bodies but showed no evidence of it. The only present hope, therefore, of eradicating it lies in the test. If all those *reacting are isolated*, whether showing symptoms or not, the disease may perhaps be stamped out of a herd. As I indicated, this was done with a Jersey herd last May, and I am glad to say up to the present there has been no recurrence of the disease, but of course the time is still short. Until more is known about this condition it is difficult for the State to frame regulations to combat it, but the disease is now so widespread, and works such havoc with our dairy herds, that it is to be hoped some measures may be adopted in the near future to prevent affected animals from being exposed and sold in the open markets, and so being a source of infection to others.

### Discussion.

The President observed that they had had a most interesting paper from Mr. Male, and invited observations from members of the Association on the matter. He believed that Johne's disease was very prevalent on certain pastures in his own district (Henley-on-Thames).

Mr. Simpson said they were all very much oblized to Mr. Male for coming forward at the last moment and providing them with such an interesting paper, which had been an "eye-opener" to him (Mr. Simpson). He was glad to say that the disease was not very prevalent just in the Maidenhead locality—one herd of Jerseys getting perhaps one case in a twelvemonth. It seemed almost impossible to stamp it out, and although he did not himself believe in heredity, it was a chain of relations that had always fallen with the disease. The last case he had was one in which grandmother, mother, and daughter fell with it, other members of the herd keeping comparatively healthy. In that case the cows were turned out in a park with a good many deer, but no similar symptoms had been noticed in the deer, although they ran over the same pasturage. He would like further information as to where they could obtain the Avian tuberculin, the dose to give, and whether it was advisable to test with ordinary tuberculin before applying the Avian test if tuberculosis was suspected as well. The cases he himself had come across had usually been pretty far advanced. One had a fœtid diarrhœa, with the characteristic bubbles in it, showing the fermenting nature of fæces. He quite agreed with Mr. Male that they might try everything under the sun in the way of antiseptics or astringents if the disease had got a good hold. If the Avian test could be relied on, no doubt it would go a very great way to help them in stamping out the disease. He again thanked Mr. Male for the instruction he had given them. (Hear, hear.)

Mr. Varney said that his practice lay in a dairy dis-

trict in which they saw a good many of those cases. In his opinion it was a most difficult thing to decide, in many cases, whether they had to deal with Johne's disease or parasitic gastritis. When they got one case they got seven or eight on one farm. It would not occur again on that particular farm for a considerable number of years, and then it would break out in a virulent form. He would like to know whether Mr. Male had ever tried carbolic acid? He (Mr. Varney) was of opinion that it was best to stamp out the disease at once, because he believed that the diarrhœa contaminated the ground, and that subsequently animals grazing over it were likely to be affected.

The PRESIDENT confirmed Mr. Simpson's statement with regard to a Jersey herd they had affected some years ago at Stonor Park—a very old deer Park, in which none of the deer were affected. Neither had he at Fawley, although there had been some cases amongst the polled Angus and some of the Scotch cattle which had been brought there. Also at Crowsley, another deer park, although they had had some cases among Scotch cattle, it had never occurred among the deer or the shorthorn cattle. They had always had affected cattle destroyed and buried.

Mr. TENNANT wished to add his thanks to Mr. Male for his very interesting paper. He himself had not had much experience in Johne's disease. He had tested with tuberculin and not got a reaction; but he had not had an opportunity of testing with the Avian tuberculin. He had not as yet met with a case of the disease in Shorthorns. In regard to deer, the largest outbreak which he had had to deal with was entirely due to tape worms, and in that case they lost 15 head in one year. While Johne's disease appeared to affect Jerseys principally, he did not think it was confined to that breed of cattle.

Mr. MALE replied on the discussion, first thanking the members for the very kind remarks they had made about his paper, which were not deserved. Mr. Simpson had noticed that the disease appeared to affect families of cows, and he (Mr. Male) had noticed the same thing. In the first herd he had spoken of three of them were related—he thought two of them were calves of a particular cow which had died of Johne's disease; and the other one which he had killed was out of a cow which had died of the same disease. It would appear, therefore, to have rather an hereditary nature, though no doubt the disease was contracted from the mother. The avian tuberculin could be obtained from the Veterinary College—Sir John M'Fadyean had a good stock of it. The dose was 5 c.c. and he thought the price was the same as ordinary tuberculin. He obtained his at first through the courtesy of Mr. Stockman, and thought it was "brewed" from some that gentleman got from Germany. As to testing with ordinary tuberculin before the avian test, he thought it a very good plan, especially if the animals were showing symptoms of ordinary tuberculosis—such as cough, because he considered that possibly animals affected with tuberculosis might show a slight reaction when inoculated with avian tuberculin. He had no reason, however, for saying that, as he had never tried it personally, but he thought it very probable; and with ordinary tuberculin beforehand there would be no confusion as to the result. He would advise only a short period, because the first test with ordinary tuberculin might prevent a reaction to the avian tuberculin if the animal had tuberculosis. The presence of the bubbles in the fæces, he thought was more or less mechanical, due to the profuseness of the diarrhœa and the violence with which it was expelled; and he did not know that it was adiagnostic symptom. The stain he had found best was the Ziehl-Neilson method. He had given carbolic acid, among other things, but with the same result—he had had no luck with it. Personally he did not think that any drug would cure the disease after the symptoms of diarhœa had been shown. Two of the specimens he had shown were from cows that had been killed within two or three days after diarrhœa was first noticed; and in each case the bowels were terribly thickened. Johne's disease could be easily mistaken for parasitic gastritis, and so he would advise testing with the avian tuberculin. It was interesting to notice that deer did not appear to be as prone to the disease as Jersey cows, although he understood it had been found in deer. Mr. Stockman had described it in sheep; and he (Mr. Male) was afraid that he had mistaken some cases of Johne's disease for parasitic gastritis or enteritis of sheep.

The PRESIDENT moved a very hearty vote of thanks to Mr. Male for his exceedingly interesting paper.

Mr. BUTTERS, who seconded the resolution, mentioned that in his early days in the profession he had seen cases which presented exactly the same appearance as Johne's disease, but they were then set down to a sort of dysentery, and the animals generally died—a post-mortem showing the thickening and corrugation of the bowels. Their present knowledge was due in a great measure to the keen and accurate observation of Prof. Bang, of Copenhagen.

The vote was carried by acclamation.

Mr. MALE, in reply, said he was only too pleased to do anything he could for the Association.

A vote of thanks to the President was unanimously passed on the motion of Mr. Willett, seconded by Mr. Slocock.

At the close of the meeting tea was provided at the kind invitation of Mr. Percy Simpson, and that gentleman was heartily thanked for his hospitality on the call of Mr. Male, seconded by Mr. Butters.

J. P. MALE, Hon. Sec.

## REVIEW.

A TEXT-BOOK ON DISEASE-PRODUCING MICRO-ORGANISMS.—By MAXIMILIAN HERZOG, M.D., Professor of Pathology and Bacteriology in the Chicago Veterinary College. Royal 8vo. Pp. xij+644. Fourteen coloured plates and 214 illustrations in the text. Price 21/- net. Baillière, Tindall and Cox, 8 Henrietta Street, Covent Garden, London, W.C.

This book is specially designed to meet the bacteriological and protozoological needs of veterinary students and practitioners, and it is quite certain that there is real need for a volume dealing with these subjects from a veterinary standpoint.

The work under notice is a courageous, and to some extent a successful, attempt to fill a gap in our literature. Its actual literary matter (exclusive of the index) extends to 623 pages, with copious illustrations. The text is divided into four parts. The first deals with the theory and practice of general bacteriology, including such subjects as the classification, morphology, and biology of bacteria, immunity, and methods of cultivation and examination. The second is devoted to special bacteriology and the higher vegetable pathogenic organisms, thus covering the lower and higher hyphomycetes, and the author has chosen to include the ultravisible viruses in this section. The third part deals with micro-organisms in foods and soils, and naturally devotes much space to the bacteriology of milk; and the fourth concerns the pathogenic protozoa, the author including rabies and the Negri bodies under this head.

It will thus be seen that the scope of the work is comprehensive. Unfortunately the details of its execution leave much to be desired. The author seems to have attempted to cover more ground than was possible to cover satisfactorily within the space he has allowed himself, and in consequence we find some serious errors

of judgment in the allotment of space—some very important subjects, such as surra, being far too briefly considered. A graver fault is that the teaching with regard to questions of fact concerning many diseases is far from satisfactory. Both these faults are exemplified in the case of distemper, which is dealt with in half a page, and though this small space is chiefly occupied with a description of the lesions, cutaneous and ocular lesions are not even mentioned. Further, not only does the author convey no idea of the pathological complexity of distemper, but his account will not help the reader to identify a large proportion of the cases most commonly seen in practice. Glanders and anthrax, though treated at greater length, are little more satisfactory—for instance, it is stated (page 242) that anthrax bacilli appear in the blood in large numbers ten to twelve hours before death, and the author recommends (page 249) the examination of the blood during life as a diagnostic method. Further, the staining reaction of anthrax bacilli, with which M'Fadyean made us familiar, is never mentioned. In fact a close examination reveals rather numerous statements which are either questionable or certainly incorrect, and we mention these with considerable regret, for the book, in many respects, holds the kernel of a really good one. It is framed upon commendable lines; its faults, though some are serious, are those of detail. Despite numerous inaccuracies, it cannot be dismissed as useless; indeed, the average veterinary student will probably find it very useful indeed. A thorough revision—extending even to the titular descriptions of the illustrations—with possibly some augmentation of space, might render it in very truth a comprehensive and trustworthy handbook for students and practitioners alike. W. R. C.

## A Veterinary Contingent, Officers Training Corps.

A Military Correspondent of *The Irish Times* writes:

"The Veterinary Contingent of the Officers' Training Corps, which is being organised in connection with the Royal Veterinary College of Ireland, is the first unit of its kind to be formed in connection with the Corps, and the movement for its formation has had the active support of Sir Neville Lyttelton since its inception. Sixty cadets were present at the inaugural meeting held on Thursday, 4th inst., when, in the absence of Sir Christopher Nixon, the Commander of the Forces was received by Prof. Mettam and the Governors of the Royal Veterinary College in Ireland. In the course of his address to the cadets, Sir Neville Lyttelton said that he could conceive of no contingent being of better use to Army service. The experience of the South African war and the wastage of animal life showed undoubted necessity for the improvement and extension of the Veterinary Service. The war establishment in animals was always greatly in excess of peace establishment, and a corresponding increase in Veterinary *personnel* in time of war was therefore necessary. There were difficulties in obtaining civil assistants in professional matters, and the employment of professional men without a certain amount of Army training was unsatisfactory. The formation of a Veterinary Contingent would tend to supply this deficiency, and enable civilians to take their place with Regular officers in Army Veterinary work should the call come. A further advantage would accrue in connection with the College professional training of the cadets, as an extended field for clinical instruction would be opened to them among the sick and injured animals belonging to the Army. In outlining the syllabus of instruction proposed, Sir Neville Lyttelton drew attention to the ample facilities for training afforded in the Irish Command, especially at the Curragh Camp, where, besides a large mounted garrison, there exist a complete Veterinary hospital and Army Veterinary Corps organisation. The Commander of the Forces impressed upon the cadets the necessity for efficiency, and assured them that he would continue to take the keenest interest in the progress of this first Veterinary Contingent of the Officers' Training Corps, which he would again see when in camp at the Curragh."

## Testimonial to Principal Dewar.

The Committee desire to acknowledge receipt of the following subscriptions to testimonial fund from Messrs.

| | £ | s. | d. |
|---|---|---|---|
| A. McKenzie, Kirkcaldy | | 10 | 0 |
| C. S. Hunting, Eastwood | | 10 | 0 |
| W. Nairn, Blairgowrie | | 10 | 6 |
| P. Wilson, Lanark | 1 | 1 | 0 |
| J. Conner, Talmouth | | 5 | 0 |
| J. Gault, Ballymoney | 1 | 1 | 0 |
| R. Murray, Rugeley | | 10 | 6 |
| J. McFarlane, Doune | | 10 | 6 |
| J. Forbes, Truro | | 10 | 6 |
| A. D. McGregor, Stroud | | 5 | 0 |
| C. G. Thomson, Lurgan | | 10 | 0 |
| R. M. Lewis, Golspie | 1 | 0 | 0 |
| D. Hannay, Kelso | | 10 | 6 |
| G. W. Davidson, Settle | | 10 | 6 |
| H. S. A. Dunn, Reading | | 10 | 6 |
| W. Brown, Banchory | 1 | 1 | 0 |
| A. McTurk, Swaffham | | 10 | 6 |
| W Walker, Wigan | | 10 | 0 |
| W. S. Worthington, Wigan | | 10 | 6 |
| J. H. Primmer, Dunfermline | | 10 | 6 |
| R. Bryden, London | 1 | 1 | 0 |
| A. E. Willett, Staines | 1 | 1 | 0 |
| A. Niven, Kintore | | 10 | 0 |
| D. R. Crabb, Plymouth | | 10 | 6 |
| D. Silvestro Rabaghati, Cairo | 1 | 1 | 0 |
| Ainsworth Wilson, Witham | 1 | 1 | 0 |
| J. W. Pollock, Lockerbie | | 10 | 0 |
| E. Armstrong, Plymouth | | 10 | 6 |
| T. Wilson, Nantwich | | 10 | 6 |
| W. Aitken, Edinburgh | | 10 | 6 |
| J. Riddoch, Edinburgh | | 5 | 0 |
| Jas. Storie, East Linton | | 10 | 6 |
| John Storie, " | | 10 | 6 |
| G. H. Jelbart, Stow-on-Wold | | 10 | 6 |
| T. E. Loughran, Monaghan | | 10 | 6 |
| W. H. Nicol, Capt. A.V.C. | 1 | 1 | 0 |
| Anonymous | 1 | 11 | 0 |
| Amount previously acknowledged | 5 | 14 | 6 |
| | £29 | 17 | 6 |

JAS. ANDERSON, *Hon. Sec.*

The Committee would be obliged if all intending subscribers will remit subscriptions to the Secretary not later than Tuesday, 16th inst.

## Cruelty to a Horse.

Charles Dunkley, a carman, was charged at South-Western Police Court on Saturday, May 6th, with ill-treating a mare of which he had charge. The accused was seen to lash the animal with a whip, striking it in a tender part of the body. He wanted to make the animal pull a wagon off a tramway line.

Mr. J. Bond, M.R.C.V.S., who was called for the defence, said he believed the injury the animal received was caused accidentally.

Mr. de Grey, the magistrate, said it was perfectly shocking that a gentleman, a member of the College of

Veterinary Surgeons, should come into the witness box and represent that there had been no deliberate cruelty. He ought to be thoroughly ashamed of himself.

The accused was fined £5 or one month's imprisonment.—*Daily Mail.*

### Donations to R.C.V.S.

The Secretary of the Royal College of Veterinary Surgeons desires to acknowledge the receipt of further donations to the College funds, from

| | | | |
|---|---|---|---|
| Capt. W. J. Dale, A.V.C., India | £1 | 1 | 0 |
| Capt. L. M. Verney. A.V.C., Tidworth, Wiltshire ... ... | 1 | 1 | 0 |
| Amount previously acknowledged | 85 | 1 | 0 |
| | £87 | 3 | 0 |

### OBITUARY.

CHARLES SNOWDON, V.S., Barton-le-Street, Malton, Yorks.

Mr. Snowdon had ridden to his farm on a pony, which, when left, bolted across a field in which Mr. Snowdon's son was at work with a harrow and two horses. The pony's dash startled the horses attached to the harrow, and they swerved to the right, knocking Mr. Snowdon down, and dragging the harrows over him. The machine inflicted terrible injuries, which soon proved fatal.

J. W. SCHOFIELD, M.R.C.V.S., Failsworth, Lancs. New, Edin : May, 1889.

Death took place on May 6th from appendicitis, at the early age of 45 years.

### ARMY VETERINARY SERVICE.

Extract from *London Gazette*,

WAR OFFICE, WHITEHALL, May 5.

TERRITORIAL FORCE. ARMY VETERINARY CORPS.

A. G. Saunders to be Lieut. Dated March 18.

The Annual Regimental Dinner will take place at the Whitehall Rooms, Hotel Metropole, on Friday, June 16, at 8 p.m. Gentlemen intending to dine are requested to notify their intention as early as possible to Messrs. Holt and Co.. 3 Whitehall Place, S.W.

### PAROTITIS IN THE DOG.

Sir,

Having seen two or three cases of this affection, I do not see why there should be any mystery about the disease, or any attempt to associate it with that "olla podrida" called distemper.

The disease may be acute or chronic, a primary affection, or secondary to stomatitis and pharyngitis. Pus generally forms in the acute cases; and in the chronic a firm, tense and painless swelling. An organism called a diplo-streptococcus has been isolated from the saliva of Stenson's duct in a dog by Busquet and Boudeaud.

Treatment consists in warm fomentations or absorbent ointment to the gland. Abscesses must be opened early. In the chronic cases injection of tincture of iodine or Lugol's solution into the gland, and potassium iodide internally are indicated.

My cases have been in a retriever, a collie and a spaniel. The illness is evidently due to a specific infection, and the carriers in epidemics among horses and cattle have been stated to be awned grasses, such as Hordeum silvatium and Bromus maximus.—Yours truly, G. MAYALL.

### DISEASES OF ANIMALS ACTS 1894 TO 1910, SUMMARY OF RETURNS.

| Period. | Anthrax. Outbreaks Confirm'd | Anthrax. Outbreaks Reported | Anthrax. Animals Confirm'd | Anthrax. Animals Reported | Foot-and-Mouth Disease. Outbreaks | Foot-and-Mouth Disease. Animals. | Glanders (including Farcy) Outbreaks | Glanders (including Farcy) Animals. | Counties Affected Animals Attacked | Sheep Scab. Outbreaks | Swine Fever. Outbreaks. | Swine Fever. Slaughtered. * |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| GT. BRITAIN. Week ended May 6 | 16 | | 21 | | | | 5 | 7 | | 1 | 53 | 623 |
| Corresponding week in 1910 | | 34 | | 35 | | | 11 | 14 | | 1 | 29 | 452 |
| Corresponding week in 1909 | | 32 | | 34 | | | 7 | 44 | London 5 | 3 | 45 | 447 |
| Corresponding week in 1908 | | 22 | | 28 | | | 13 | 35 | | 2 | 44 | 220 |
| Total for 18 weeks, 1911 | 359 | | 419 | | 1 | 18 | 76 | 221 | Middlesex 1 Lanark 1 | 288 | 808 | 8592 |
| Corresponding period in 1910 | | 556 | | 680 | | | 135 | 326 | | 302 | 410 | 3484 |
| Corresponding period in 1909 | | 517 | | 705 | | | 222 | 883 | | 412 | 560 | 5219 |
| Corresponding period in 1908 | | 431 | | 598 | 3 | 112 | 281 | 967 | | 608 | 399 | 3141 |

Board of Agriculture and Fisheries, May 9, 1911.

| | Parasitic Mange (outbreaks) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| IRELAND. Week ended May 6 | 1 | 1 | ... | ... | ... | ... | ... | 3 | 2 | 8 |
| Corresponding Week in 1910 ... | ... | ... | ... | ... | ... | ... | 3 | 9 | ... | 122 |
| Corresponding Week in 1909 ... | ... | ... | ... | ... | ... | ... | ... | 9 | 2 | ... |
| Corresponding Week in 1908 ... | 1 | 1 | ... | ... | ... | ... | ... | 1 | 5 | 172 |
| Total for 18 weeks, 1911 ... | 4 | 4 | ... | ... | 1 | 2 | 37 | 227 | 47 | 807 |
| Corresponding period in 1910 ... | 4 | 6 | ... | ... | 1 | 2 | 32 | 300 | 29 | 807 |
| Corresponding period in 1909 ... | 2 | 2 | ... | ... | ... | ... | 37 | 262 | 12 | 117 |
| Corresponding period in 1908 ... | 4 | 7 | ... | ... | ... | ... | 19 | 245 | 68 | 1378 |

Department of Agriculture and Technical Instruction for Ireland, (Veterinary Branch), Dublin, May 8, 1911

NOTE.—The figures for the Current Year are approximate only.

* As Diseased or Exposed to Infection

JOHN ROBERT URQUHART DEWAR, F.R.C.V.S.

PRINCIPAL, DICK VETERINARY COLLEGE, EDIN: 1895-1911.